

Please replace the paragraph at page 1, prenumbered line 24 to page 2, line 8, with the following rewritten paragraph:

An example of such a substrate processing apparatus will be described with reference to a configuration of Patent Document 1. In ~~the figure~~ Fig. 18, 11 represents a carrier stage 11 to/from which a carrier 10 containing 25 wafers W, for example, is loaded/unloaded. For example, three process blocks 12A, 12B, 12C are connected to carrier stage 11, and a light exposure device 12E is connected to the third process block 12C via an interface block 12D. Process blocks 12A, 12B, 12C include transfer means 13A, 13B, 13C, respectively, at the centers, and around the means, first and second process blocks 12A, 12B have coating units 14A, 14B, respectively, for coating a wafer with a coating solution, third process block 12C has a developing unit 15 for performing developing of the wafer after exposure to light, and all process blocks 12A-12C include shelf units 16A-16G provided with heating unit, cooling unit, delivery unit and others for performing prescribed heating or cooling processing on the wafer before or after the processing by coating unit 14 or developing unit 15.

Please replace the paragraph at page 3, lines 14-28, with the following rewritten paragraph:

As such, in the coating and developing device as well, it would be practical to considerably increase the quantity of items to be processed from about 50 items per hour to about 100 items per hour in a stepwise manner, to be consistent with the throughput of light exposure device 12E. Practically in the coating and developing device, however, a series of processing are carried out using first through third process blocks 12A-12C as a whole, and therefore, transfer means 13A-13C provided at respective process blocks 12A-12C need to transfer the wafers not only within corresponding process blocks 12A-12C, but also transfer means 13A of first process block 12A needs to transfer wafers between first and second

process blocks 12A and 12B, transfer means 13B of second process block 12B needs to transfer wafers between second and third process blocks 12B and 12C, and transfer means 13C of third process block 12C needs to transfer wafers between third process block 12C and interface block 12D. As the load of transfer means 13A-13C are thus large, if it is tried to increase the quantity of total items to be processed by the coating and developing device to about 100 items, customization would not be easy.

Please replace the paragraph at page 9, lines 2-9, with the following rewritten paragraph:

On one side of carrier block B1, for example on the left end side as seen from the carrier placement portion 21 side, a transfer block B2 having a transfer path linearly extending in the direction approximately orthogonal to the arrangement direction of carriers C is provided to be connected to carrier block B1. First transfer means 22 of carrier block B1 is configured to be movable left and right, back and forth, up and down and also rotatable about a vertical axis so as to take out a ~~substrate G~~ wafer W from substrate carrier C and deliver the relevant ~~substrate G~~ wafer W to second transfer means 23 of transfer block B2.

Please replace the paragraph at page 9, lines 10-18, with the following rewritten paragraph:

Here, a first delivery stage 24 is provided at carrier block B1 in the vicinity of the region connected to transfer block B2, for delivering wafer W between first transfer means 22 of carrier block B1 and second transfer means 23 of transfer block B2. This delivery stage 24 is configured in two stages of: a delivery stage for loading, for use in loading wafer W to transfer block B2; and a delivery stage for unloading, for use in unloading wafer W ~~to~~ from transfer block B2. It is noted that delivery stage 24 may be provided in transfer block B2 in a

region accessible by first transfer means 22. Alternatively, it may be configured in one stage so that a common delivery stage can be used for loading/unloading wafer W with respect to transfer block B2.

Please replace the paragraph at page 10, line 24 to page 11, line 10, with the following rewritten paragraph:

Shelf units U2, U3 are each configured by stacking a plurality of units at the region accessible by second transfer means 23 of transfer block B2. In this example, there are provided for example three vacuum drying units (VD) for removing solvent included in the coating solution after the liquid processing performed at coating unit 32, anti-reflection coating forming unit 34 and others, for example four heating units (LHP) for performing prescribed heating processing on wafer W before coating with the resist solution, for example one heating unit (PAB), called a pre-baking unit or the like, for performing heating processing on the wafer after coating with the resist solution, for example two heating units (PEB), called a post-exposure baking unit or the like, for performing heating processing on the wafer W after exposure to light, for example two temperature regulating units (CPL) that are units for adjusting wafer W to a prescribed temperature, and additionally, for example one delivery unit (TRS1) for loading wafer W to process block B3, and for example one delivery unit (TRS2) for unloading wafer W from process block ~~S4~~ B3, which are allocated in a vertical direction.

Please replace the paragraph at page 11, lines 11-15, with the following rewritten paragraph:

These delivery units ~~TRA1~~ TRS1, TRS2 correspond to the second delivery stage of the present invention. Although Figs. 3-5 show an example of the layout of these units, the

number and the types of the units are not limited thereto, and in this example as well, it may be configured to have a single delivery unit to be used for both loading of wafer W to process block B3 and unloading of wafer W from process block B3.

Please replace the paragraph at page 11, lines 16-24, with the following rewritten paragraph:

Third transfer means 31 is configured to be movable up and down, back and forth, and also rotatable about a vertical axis, as will be described later, and is responsible for transferring ~~substrate G~~ wafer W between liquid process unit group U1 and shelf units U2, U3. It is noted that second transfer means ~~22~~ 23 is not shown in Fig. 2 for the sake of convenience. Second transfer means 23 is configured to be movable in the horizontal direction in Fig. 1 along guide rail 25, movable up and down and back and forth, and rotatable about a vertical axis, as described above, so as to deliver wafer W received from first transfer means 22 to delivery unit TRS1 (TRS2) of process block B3.

Please replace the paragraph at page 12, line 23 to page 13, line 8, with the following rewritten paragraph:

First and second utility lines 41, 42 have connection ends 41a, 42a, respectively, configured to be attachable/detachable to/from the connection ends of the corresponding external utility lines. Meanwhile, as shown in Fig. 7, transfer block B2 is provided with a second utility unit U6 of the external side, corresponding to first utility unit U5. This utility unit U6 has connection ends 41b, 42b of the external utility lines on the lower side of second transfer means 23 of transfer block B2 (see Fig. 3). Further, the ~~multiple~~ other end side of connection ends 41b, 42b of the external utility lines of second utility unit U6 are respectively connected to the supply sources of city water, developing solution, inactive gas and dry air, electric supply cable, I/O signal line and others. When process block B3 is pressed to the

second transfer means 23 side of transfer block B2, connection ends 41b, 42b on the external side (on the transfer block B2 side) are connected to connection ends 41a, ~~41b~~ 42a on the process block B3 side. Here, the utility lines on the transfer block B2 side are branched to the respective units via electric equipment storing portion 36.

Please replace the paragraph at page 13, lines 9-21, with the following rewritten paragraph:

The side of second process block B4 opposite to the first process block B3 side is connected via an interface portion B5 to a light exposure device B6. Further, interface portion B5 is set to be connected to the side of transfer block B2 opposite to the side connected to carrier block B1. Interface portion B5 is provided with delivery means 26, which is configured to be movable up and down, left and right, back and forth, and also rotatable about a vertical axis, for example, so as to deliver ~~substrate G~~ wafer W between second transfer means 23 of transfer block B2 and light exposure device B6. Here, at interface portion B5, in the vicinity of the region connected to transfer block B2, a delivery stage 27 formed in two stages for example is provided for delivering wafer W between delivery means 26 of interface portion B5 and transfer means 23 of transfer block B2. Delivery stage 27 may be provided in transfer block B2 in the region accessible by second transfer means 23 and by delivery means 26 of interface portion B5, or it may be configured with one stage.

Please replace the paragraph at page 13, line 22 to page 14, line 8, with the following rewritten paragraph:

Further, in this example, the space between carrier block ~~C~~ B1 and first process block B3 is configured as a space where one process block can be accommodated, which allows

mounting of an additional process block B0. Here, carrier block B1 and transfer block B2 are connected via a rotation shaft 28. When installing additional process block B0, as shown in Fig. 8A, carrier block B1 is rotated via rotation shaft 28 to be separate from transfer block B2, and additional process block B0 is transferred in the state where transfer block B2 and carrier block B1 are separate from each other, and process block B0 is drawn toward transfer block B2 to establish connection between connection ends 41a, 42a of the utility lines on the process block B0 side and connection ends 41b, 42b of the utility lines on the transfer block B2 side, as described above (see Fig. 6A). Additional process block B0 is attached to transfer block B2 using a hinge 528, and then, carrier block B1 is returned to the original position such that carrier placement portion 21 is adjacent to transfer block B2 and additional process block B0, as shown in Fig. 8B. That is, carrier block B1 is capable of rotating about rotation shaft 28 provided at the end of transfer block B2. Process blocks B0, B3 and B4 are attached to transfer block B2 via hinge 528, and rotated about hinge 528 to be positioned in place.

Please replace the paragraph at page 23, lines 21-27, with the following rewritten paragraph:

The flow of wafers W in this substrate processing apparatus will now be explained, taking the case where wafer W1 to be subjected to first processing, wafer W2 to be subjected to second processing and wafer W3 to be subjected to third processing are stored in the same carrier C as an example. Firstly, wafer W1 to be subjected to the first processing is taken out by first transfer means 22 from within carrier C loaded to carrier placement portion 21 of carrier block B1, and is delivered to delivery stage 24 of carrier block B1.

Please replace the paragraph at page 23, line 28 to page 24, line 13, with the following rewritten paragraph:

Wafer W on this delivery stage 24 is delivered by second transfer means 23 of transfer block B2 via delivery unit TRS1 of shelf unit 83A of first process block S1 to third transfer means ~~34~~ 82, for example, and in process block S1, it is transferred in the order of, e.g., temperature regulating unit (CPL) → lower-layer anti-reflection coating forming unit (BARC) → vacuum drying unit (VD), to form the lower-layer anti-reflection coating, and thereafter, it is transferred in the order of heating unit (LHP) → temperature regulating unit (CPL) → coating unit → vacuum drying unit (VD), to perform the resist solution coating processing. Thereafter, it is transferred in the order of heating unit (PAB) → temperature regulating unit (CPL) → upper-layer anti-reflection coating forming unit (TARC) → vacuum drying unit (VD) → heating unit (LHP), to form the upper-layer anti-reflection coating, and then transferred along the path of delivery unit TRS2 for output → second transfer means 23 of transfer block B2 → delivery stage 27 of interface portion B5 → delivery means 26 → light exposure device B6, where prescribed light exposure processing is carried out.

Please replace the paragraph at page 24, line 25 to page 25, line 9, with the following rewritten paragraph:

Further, wafer W2 taken out of the same carrier C to be subjected to the second processing is delivered by second transfer means 23 via delivery stage 24 of carrier block B1 to third transfer means 31 of second process block S2 via delivery unit TRS1 for example, and in process block S2, it is transferred in the order of, e.g., hydrophobic process unit (ADH) → temperature regulating unit (CPL) → coating unit (COT) → vacuum drying unit (VD), to be subjected to resist solution coating processing. Thereafter, it is transferred in the order of heating unit (PAB) → temperature regulating unit (CPL) → upper-layer anti-

reflection coating forming unit (TARC) → vacuum drying unit (VD) → heating unit (LHP), to form the upper-layer anti-reflection coating, and then transferred along the path of delivery unit TRS2 for output → second transfer means 23 of transfer block ~~[[B]]~~ B2 → delivery stage 27 of interface portion B5 → delivery means 26 → light exposure device B6, where prescribed light exposure processing is carried out.

Please replace the paragraph at page 25, lines 16-27, with the following rewritten paragraph:

Further, wafer W3 taken out from the same carrier C to be subjected to the third processing is delivered by second transfer means 23 via delivery stage 24 of carrier block B1 to third transfer means ~~31~~ 82 via delivery unit TRS1 of third process block S3 for example, and in process block S3, it is transferred in the order of, e.g., temperature regulating unit (CPL) → lower-layer anti-reflection coating forming unit (BARC) → vacuum drying unit (VD) → heating unit (LHP), to form the lower-layer anti-reflection coating, and then transferred in the order of temperature regulating unit (CPL) → coating unit (COT) → vacuum drying unit (VD) → heating unit (PAB), to be subjected to the resist solution coating processing. Thereafter, it is transferred along the path of delivery unit TRS2 for output → second transfer means 23 of transfer block B → delivery stage 27 of interface portion B5 → delivery means 26 → light exposure device B6, where prescribed light exposure processing is carried out.

Please replace the paragraph at page 26, lines 10-16, with the following rewritten paragraph:

In this configuration, a series of processing of different kinds are completed in units of process blocks ~~B~~ S, and thus, the case of expanding the kinds of items can be addressed by



adding a process block ~~B~~ S corresponding to the new kind of item, which ensures a great degree of freedom of processing carried out in the relevant apparatus. Accordingly, it is possible to address the production of various kinds of items in small quantities as in the case of, e.g., mounting wafers to be subjected to different kinds of processing in the same carrier C, as explained in the above embodiment.

Please replace the paragraph at page 26, lines 17-28, with the following rewritten paragraph:

It is also possible to set such that processing of different kinds is carried out for different carriers C. In this case, carrier C1 storing wafer W1 to be subjected to first processing, carrier C2 storing wafer W2 to be subjected to second processing, and carrier C3 storing wafer ~~W2~~ W3 to be subjected to third processing may be placed on carrier placement portion 21, for example, and first transfer means 22 may take out wafers W1-W3 sequentially from carriers C1-C3, and second transfer means 23 may transfer them to corresponding process blocks C1-C3, and after prescribed processing is carried out in the respective process blocks S1-S3, the wafers may be returned to the corresponding original carriers C1-C3 by second transfer means 23 and first transfer means 22. It is noted that delivery stage 27 may be provided with a temperature regulating function for keeping wafer W at a uniform substrate temperature before delivery, or a plurality of stages may be provided.

Please replace the paragraph at page 27, lines 1-8, with the following rewritten paragraph:

In the present embodiment, process blocks having lower-layer anti-reflection coating forming units (~~BASC~~ BARC), coating units (COT), upper-layer anti-reflection coating forming units (TARC), vacuum drying units (VD), heating units (LHP), heating units (PAB),

heating units (PEB), temperature regulating units (CPL), and delivery units (TRS1, TRS2) arranged in the same number and in the same layout may be prepared as process blocks S1-S3, for example, and the required process units may be used in each of process blocks S1-S3. In this case, the respective process units are mounted in advance in the maximum required number.